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3. A method for the dehydration of naturally occurring consumable substance, which comprises combining such substance with an ionizable salt and an [additional] antimicrobial agent and heating the resulting mixture in particulate form at a temperature below about 110° F until the water content is reduced to below 15 %.

4. The method of claim 1 wherein the process is carried out in the presence of an oxygen containing antimicrobial agent and [the] an ionizable consumable salt.

5. The method of claim 3 wherein the [additional] anti-microbial agent is a chlorine-containing compound.

15. The method of dehydrating chicken cartilage which comprises comminuting such, soaking the resulting product in an aqueous solution of an antimicrobial agent, blending such with potassium or sodium chloride and dehydrating the resulting mixture in particulate form at temperatures below 110° F until the water content is reduced to below 10%.

16. The method of claim 15 wherein the [chicken cartilage is also blended with] antimicrobial agent is a hypochlorite.

REMARKS

The claims in the subject application have been amended to more clearly distinguish the claimed invention over the references cited in the Office Action.

Applicants' claims have been rejected under 35 USC 102 (b) as being anticipated by Ericson. As is clearly stated in the "Summary of the Invention", this reference relates to a method of extracting, fermenting and concentrating the extract of a plant material.

Using the ordinary dictionary definition and as used in the reference, the term

"extracting" means removing part of the original material and leaving a residue. Clearly

in the process of the reference the extracted material is no longer the same as the original material. Thus the patentee separates the allegedly useful soluble products from the insoluble residue which he discards. The extraction process of the reference employs either pure alcohol or aqueous alcohol to which a hypophosphate is added. This in itself can lead to denaturation. The extraction process furthermore is continued such that at the same time not only is part of the original material removed and dissolved but it is furthermore "fermented", thereby changing the structure even further. It is only after fermentation that the dissolved material is dried or dehydrated. Thus the dehydrated product is not the same as the original as is the case in the claimed invention.

In the fermentation process of Ericson a solution is used that is either alcohol or an aqueous solution that contains in addition to alcohol ionizable salts and a hypophosphate. The extract is fermented in this solution and then dried. Thus the salt is not added to the original material. Even though Ericson advocates a low temperature for fermentation and concentration, it is clear that the extracted product is different from the original product. In column 4, lines 46-51, the patentee admits that the use of alcohol will cause denaturation, but provides no guidelines as to how much alcohol can be used without causing denaturation. Thus the reference does not teach a method of maintaining even the structure of the extracted material, let alone the structure of the original material.

Applicants have amended their claims to more distinctly define the claimed invention. Applicants invention is directed to a dehydration process designed to maintain the original structure and components of the treated material without separating or extracting any part of the original material or in any way changing the structure of the

material treated. Applicants add an ionizable salt to the entire material to provide the necessary stability to the dried product. Applicants also employ an antimicrobial agent that is not disclosed in the reference.

The rejection of claims 1-2, 5-6 and 8 as anticipated by Ericson is believed to have been traversed in view of the foregoing argument and amendment. Ericson fails to show dehydration without separation and product modification.

Applicants' claims 1-2 have been rejected under 35 USC 102(b) as being anticipated by the abstract of JP 359088065 to Sasaki.

Sasaki discloses a process for crushing bone and marrow and treating the resulting powder with sodium hypochlorite to effect disinfection. The resulting powder is combined with a soybean lecithin solution and put through a grinder. The ground product is then washed and finally dehydrated. No conditions of dehydration are disclosed and it can not be assumed that this step will also be done under conditions that prevent denaturation. It is not clear that any of the hypochlorite is present during dehydration. What is clear however, is, that no ionizable salt is present during the dehydration. Applicants' claims as amended call for the presence of both an ionizable salt and an antimicrobial agent, and are deemed to be patentable.

Claims 1-4, 6-8 and 12 are rejected under 35 USC 103(a) as being obvious over JP 020281119 (Nippon Zoki) in view of Ericson.

Nippon Zoki relates to a process for the extraction of a virus-infected tissue. The extracted material is heated, treated with ultrasonic waves, organic solvent or acid and base, to remove the protein and then recover an "active substance". The Examiner's

description of the reference fails to consider the extraction step. Also the assertion that the "active material" of Nippon Zoki is undenatured protein is unsupported. The process disclosed does not relate to the isolation of a product, which is undenatured. On the contrary the treatment given to the suspension is designed to remove the protein from the active ingredient using means which denature proteins and cause them to decompose. Clearly there is no basis for the combination of the two references since they relate diametrically opposed extractions. One in which it the intent to preserve the structure of the extracted material and one in which it is desired to degrade such in order to separate it from the "active ingredient".

In any event the combination fails to suggest the dehydration claimed by applicants, which does not involve any separation of product.

Claims 3-4 and 8-11 were rejected under 35 USC 103(a) as unpatentable over Ericson in view of the Derwent abstract of DD 20800 (Gassmann et al).

Gassmann et al relates to an extraction process in which plant materials are extracted with an aqueous salt solution to separate the soluble protein fractions. After separation Gassmann et al remove the salt from the solution containing the protein by dialysis as a result of which the product contains little if any salt. Again the process in Gassmann et al does not retain the original structure of the material and it is therefore not comparable to the process claimed by applicants.

Claims 1-4, 6, 8, and 12 as amended are believed to be patentable over the combination of Ericson and Gassmann et al since neither reference discloses or suggests

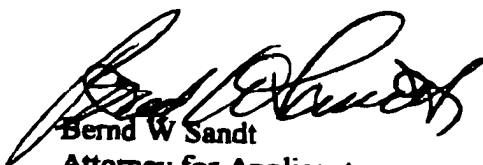
a process for dehydrating the original material without any separation and product modification.

Claims 7 and 13-17 have been rejected as obvious over Ericson and the Sasaki abstract (JP 359088065). The rejected claims are directed to the dehydration of cartilage.

Ericson relates to an extraction process of basically soft tissue and plant material in which only part of the original material is processed. Sasaki relates to a grinding process for bone and marrow. The two processes disclosed are very different and the combination is deemed to be unjustified and improper.

The Examiner is attempting to expand Ericson by relying on the Japanese reference because it discloses the extraction of bone and marrow. However bone and cartilage is not the same, as any dictionary definition of these terms shows, even though they may be adjacent to each other in the structure of mammals. The same holds true for marrow. Cartilage is a connective tissue, marrow is a vesicular tissue in the bone. Cartilage contains Collagen II and bone and marrow do not. Collagen II is a well-known protein that is readily denatured when treated with alcohol as taught by Ericson. Nothing in the combination of these references, even if proper, suggests a dehydration process that uses an ionizable salt during dehydration.

The process claimed by applicants does not involve a separation of ingredients other than the removal of water. It is a dehydration process and no separation or extraction can be implied from the wording of the claims. However applicants have amended the claims to further emphasize this difference over the prior art. The claims are now deemed to be in condition for allowance, which is respectfully requested.

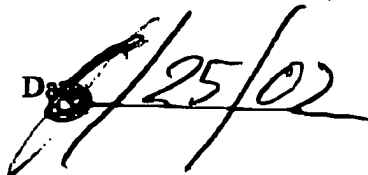


Bernd W Sandt
Attorney for Applicant
Registration No 19,213
900 Deerfield Court,
Midland, MI 48640
Tel: (989) 631-6852
Fax: (989) 835 6030

Certificate under 37 CFR 1.8

I hereby certify that a copy of the foregoing Response has been forwarded to Group Art Unit 1616 to the attention Examiner Sharmila S. Gollamudi by facsimile on the date set forth below.

Date



Signature

